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1   A   The -- I don't remember when the term

2   leadership team came about. When we were a very

3   small company, I mean there wasn't really a big

4   distinction between leadership and -- if you

5   only -- when you have 14 people, pretty much

6   everyone was a leader.

7   I can speak about most recently the

8   leadership team is referred to Brad Garlinghouse's

9   direct reports, I believe.

10   Q   Going back to the XRP grant, do you know

11   anyone else at the company who received a similar

12   grant?

13   A   Are you referring to the -- so there was

14   the bonus that I --

15   Q   Not the spot bonus, but I'm talking about

16   this ███████████ -- the agreement that provided up to

17   ███████████ XRP over four years.

18   A   The specific grant to ███████ I don't

19   know anyone else that received the ███████ That

20   was a private HR matter between, you know, me and

21   the HR, and Brad Garlinghouse. I don't know if

22   anyone else has received that specific amount.

23   MR. HECKER: Keep your voice up a little

24   bit. I can see she's having trouble hearing you.

25   Q   When you say it was a private matter, was

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1   it in connection with a dispute or something in

2   particular outside of your -- was it specific to

3   you?

4   A   The ███████ grant, that program I don't

5   know if anyone else -- when I say private matter, I

6   mean that it wasn't a public announcement. Like,

7   there's a program.

8   Q   Okay.

9   A   That's what I mean by it. Like, it

10   wasn't a program that we can roll out to anyone

11   else to my knowledge. So when I say private, you

12   know, I know that I got the ███████ grant per

13   year.

14   Q   Do you know why that was offered to you?

15   A   You know, in Silicon Valley at start-ups

16   there's equity that you get. And my equity that I

17   got at Ripple, very standard terms with, you know,

18   equity arrangements at early stage start-ups, it's

19   a four-year vest.

20   And when you join a company early, most

21   folks don't stick around after four years because

22   there's not a lot of upside in terms of equity and

23   like salaries are not competitive. And so, having

24   been at the company for now six years, there's not

25   the equity component that matters to me anymore.

1   Since that is all vested -- or pretty much all

2   vested.

3   And so, this was something else on top of

4   that for, you know, for the -- what we used to be

5   the equity component of your package, this was

6   something else to replace that.

7   Q   Did you specifically request something

8   like this as part of your compensation package?

9   A   I did not.

10   Q   So, it was offered to you.

11   A   Yes.

12   Q   And when you first joined the company,

13   did you receive equity in Ripple?

14   A   So, the -- the -- in a similar way to a

15   lot of other start-ups, you get options, you don't

16   get the equity right away. And the options vest.

17   And so the -- you know, it's pretty standard. And

18   then you have the option to turn that option into

19   equity at some point.

20   Q   Did the founders of the company have an

21   equity interest in Ripple?

22   A   Are you talking about equity stock in

23   Ripple corporation?

24   Q   Well, I'm talking about the same option

25   for equity that you were offered, did they have the

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1   same option and do they have one equity in the

2   Ripple company?

3   A   I don't know the terms of their equity

4   enrichment in Ripple, the founders.

5   Q   Have you ever discussed with anyone

6   whether or not the founders had equity interest in

7   the company?

8   A   I did not discuss their equity

9   arrangements in the company with anyone.

10   Q   Did the founders own large portions of

11   XRP?

12   A   I can -- I only know that Chris Larsen

13   has XRP.

14   Q   And how do you know that?

15   A   I know that 'cause as a company we've

16   been public about his ownership in XRP. I've --

17   I've read articles about his ownership in XRP. And

18   that's how I got most of my knowledge.

19   Q   And how much XRP was he originally

20   granted?

21   A   I don't know the exact amount.

22   Q   Approximately.

23   A   Maybe ███████ XRP, I don't know.

24   Q   Okay. And do you know the circumstances

25   under which he received the XRP?

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1   A   I do not.

2   MR. CERESNEY: We've been going for over

3   an   hour now.

4   MS. WAXMAN: I just -- sorry, yeah. I

5   have a couple of more questions in background and

6   then we can take a break.

7   Q   Do you have any -- did you have any

8   involvement in capital raising for the company?

9   A   In terms of venture capital equity

10   raising?

11   Q   Yes.

12   A   Yes, I had involvement.

13   Q   And what was your involvement?

14   A   I -- when you're raising money for a

15   start-up or a company, you have to go out and pitch

16   the story to perspective investors, venture

17   capitalist and so, I was involved in that.

18   Q   And in or around what time were you

19   involved in those pitches?

20   A   I don't remember. There were multiple

21   realms at Ripple. We had a seed round, a Series A,

22   and a Series B. And in some capacity I was

23   involved in all three.

24   Q   Okay. And just generally, what was your

25   involvement other than kind of participating in

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1   these pitches?

2   A   That was my involvement. Participating

3   in the pitches. As you're going through various

4   levels of due diligence with investors, if they had

5   any technical questions, if they wanted any product

6   demos, I usually -- I usually took that aspect as

7   well.

8   Q   And in connection with your role at

9   Ripple, did you routinely attend board meetings,

10   board of director meetings?

11   A   Not on a regular cadence. Meaning, I

12   didn't go to every board meeting. There are -- you

13   know, throughout my tenure at Ripple, it hasn't

14   been like a consistent thing. And even the board

15   meetings that I attend, I do not attend in full.

16   Q   Okay. So when you do attend, what is the

17   purpose?

18   A   In the -- in the board meeting there is a

19   specific portion that talks about product. And

20   it's often a regular agenda item, and so I'm

21   brought in to talk about product. How the product

22   is doing. Challenges with the product, you know,

23   non-technical challenges with the product such as

24   hiring engineers.

25   Q   Just going back to those pitches, what

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1 else is discussed during those pitches with

2 potential investors?

3   A   It's different with each round. So seed

4 round, A round and B round, all sort of different

5 things that investors are interested in.

6   MS. WAXMAN: Okay. It's 11:30, let's go

7 off the record.

8   (A brief recess was taken.)

9   MS. WAXMAN: 11:44 a.m., we're back on

10 the record.

11   Q   Mr. Birla, while we were off the record,

12 did you have any substantive conversations with the

13 staff?

14   A   No.

15   MS. WAXMAN: Counsel, can you confirm.

16   MR. CERESNEY: Yes.

17   Q   I want to talk a little bit about the

18 Ripple protocol, which is also known as XRP ledger.

19   Can you tell us what the XRP ledger is.

20   A   The XRP ledger is a decentralized

21 technology. And I'll break it down into a couple

22 of different areas. So, one -- one thing inside

23 the sorry -- it's a decentralized technology. And

24 there's a lot of different interpretations of what

25 a decentralized technology means.

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1   In this, it means that it's decentralized

2   in nature and that no single entity, person,

3   corporation, controls the, you know, software

4   application, the platform or the ledger.

5   Secondly, it's decentralized and

6   distributed, which means that there are nodes

7   across the world for redundancy. So, just like a

8   star fish, if one arm gets cut off it self-heals to

9   the other nodes in distributed fashion globally.

10   The XRP ledger is run and governed by a

11   set of algorithms that are managed by the --

12   something called the validators. And the

13   validators work off something called the consensus

14   protocol to determine, you know, which transactions

15   make it to the next authentic ledger.

16   So, a new ledger is proposed every three

17   to five seconds, these validators using a consensus

18   mechanism, quorum, decide and sort of give a stamp

19   of approval that this is indeed the authentic

20   ledger and then cryptographically signs it, and

21   that is sort of like the authorized ledger as

22   determined by the consensus protocol.

23   So, that is a little bit of a background

24   of the mechanics, the decentralized nature and the

25   distributive nature of the technology.

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1   So, next, I'll just talk a little bit

2   about the distributive ledger. The distributive

3   ledger's main purpose is to decentralize the

4   movement of ledger accounts, and each ledger

5   account has an address associated with it. That

6   address, often referred to as a ledger address or

7   XRP ledger account address. That ledger address is

8   a -- is signed -- it comes with a signature.

9   Private -- public and private key. The public and

10   private key are only available to whoever owns that

11   specific address.

12   Movement of digital assets between

13   accounts are conducted, you know, by the protocol

14   and some moving digital assets, XRP from one

15   account to another account that gets proposed. So

16   if someone authorizes, signs, a movement from one

17   account to another account it gets proposed and

18   then as I mentioned earlier, if that is authentic

19   as deemed by the consensus protocol every five

20   seconds, it gets its way into the next authentic

21   ledger.

22   And that's how value, XRP value, moves

23   from one account to another account without any

24   human government corporation, organization,

25   involvement. And that's like the basis of the

1   decentralized blockchain technology.

2   Also, in the XRP ledger technology and

3   protocol, there is the ability to, I think we

4   talked a little bit about this earlier, something

5   called a decentralized exchange also known as a

6   DEX, D-E-X.

7   And what the decentralized exchange

8   enables is the trading of value. And you can trade

9   XRP, which is, as represented on the decentralized

10   ledger and protocol is decentralized asset, but you

11   could also trade that asset using this

12   decentralized exchange for other assets; such as

13   Bitcoin, such as you know, whatever other folks

14   want to issue on the XRP ledger. And you can trade

15   those using the decentralized exchange as well.

16   So, in summary, this decentralized

17   technology enables movement of value. The

18   decentralized digital asset, XRP as well as other

19   assets such as Bitcoin, U.S. dollar or anything

20   that you would want to tokenize. And then the

21   second half of the technology, and these are the

22   main things that the technology enable, the

23   decentralized exchange of value as well.

24   And there's a lot more detail, if you

25   need it, I can get into. But that's pretty much

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1   the sum of it.

2   So the first part was the mechanics of

3   how the technology works and the consensus

4   algorithm, and the second is how value moves from

5   one account to the another account. And the third

6   is the decentralized nature of exchange, also known

7   as a DEX. Think about it as a decentralized

8   version of something that Bitstamp or Coinbase

9   would offer to their customers.

10   Q   Is there a UI in connection with the DEX?

11   So, if I wanted to make a trade for XRP and

12   Bitcoin, is there a platform that I can use to do

13   that, or would I have to be familiar with, you

14   know, would it have to be a node, and know how to

15   send a transaction to the XRP ledger to do that

16   transaction through the DEX?

17   A   At various times and since it's an open

18   decentralized protocol, anyone can build a UI on

19   top of the decentralized ledger. There are varied

20   companies, entities, people, that have built UIs

21   that are available for anyone in the world to

22   download.

23   And that's the decentralized nature of

24   this technology. Just like with Bitcoin there are

25   different kinds of wallets that people have built

1   around the world that enable you to do similar

2   things.

3   Q   Does Ripple have a UI that it developed

4   for -- in connection with the -- this decentralized

5   exchange feature for the Ripple protocol?

6   A   There was a open sourced -- open-sourced

7   project and Ripple developers contributed to the

8   open-source project. That Ripple -- that

9   open-source project is available on GitHub for

10   anyone to download. I actually forgot the name of

11   the code, but it's something like the XRP ledger

12   client, I believe is the name of it. And it's open

13   sourced, different folks from around the world have

14   contributed to the open source, you can download

15   it. It's a -- it's a partial UI for some of the

16   features inside of the XRP ledger.

17   Q   Okay. And do -- was it developed in

18   connection with any Ripple product?

19   A   Can you explain the question?

20   Q   Do -- does it -- I'll ask a different

21   question.

22   Does any Ripple product use this

23   decentralized exchange feature that you've

24   described?

25   A   Sorry, are you referring to the UI or is

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1   this --

2   Q   No. No, I'm not referring to the UI.

3   I'm talking about the decentralized feature, the

4   feature that's part of the protocol that allows the

5   decentralized exchange of XRP to other virtual

6   currencies; is that feature built into any Ripple

7   product?

8   A   So our enterprise products, those are the

9   ones that we're building today, does not leverage

10   the decentralized exchange on the XRP ledger.

11   Q   Okay. Has it ever? Has any product ever

12   leveraged this feature?

13   A   I don't remember exactly if a product at

14   some point leveraged it or not. There's tons of

15   code to go through, but I can say for certain that

16   none of the production customers that we have live

17   today at RippleNet use the decentralized exchange

18   feature.

19   The only hesitation is there might have

20   been prototyping. Prototyping is something where

21   we test a concept out quickly, see if it works.

22   Look at the speed performance. The prototype does

23   not go to production and so we may have prototyped

24   in the past.

25   But I'm not aware of any production

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1   customers, and when I say production customers,

2   customers that are using this technology for

3   commercial purposes. I do not believe any of the

4   commercial customers have leveraged the DEX

5   component of the XRP ledger.

6   Q   And so what are they -- what does the

7   customers simply use if they wanted to trade XRP

8   with other digital assets if they're not using

9   this -- leveraging this feature?

10   A   So, maybe just like -- stepping back a

11   little bit, our enterprise customers today are

12   joining RippleNet to improve the experience for

13   cross-boarder payments. So, specifically for

14   moving money from the U.S. to India, for example,

15   or moving money from the U.S. to Mexico, for

16   example, today there's a lot of friction using the

17   wire system. We're trying to modernize that using

18   our technology.

19   And so, to answer your question, we'd

20   have to go to different customer sets, which I can

21   take you through. Some that leverage digital

22   asset, the XRP, to remove friction from the

23   conversion process and provide liquidity. And then

24   there's other customers that do not use -- that do

25   not use the digital asset product.

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1   And there are some customers that in some

2   corridors use the digital asset product, but in

3   other corridors -- oh, sorry, when I say corridor I

4   mean, U.S. to Mexico would be a corridor. So in

5   some corridors they would use the XMP product. You

6   know there's ODL, previously known as xRapid, and

7   some that actually do not use that product.

8   Q   Right. And I definitely want to get into

9   xVia, xCurrent, xRapid and which product use XRP

10   and which don't, but my question was a little more

11   general; just why do you think this feature is not

12   widely used among Ripple customers and also perhaps

13   it's not widely used by other -- non-Ripple

14   customers?

15   MR. CERESNEY: And by feature you mean

16   the trade or --

17   Q   That -- the decentralized exchange.

18   MR. CERESNEY: Decentralized exchange,

19   okay.

20   A   So your question is; why isn't the

21   decentralized exchange used by more customers or

22   more entities even beyond customers?

23   Q   Yeah. I -- I understood from your

24   comment that it was not a widely used feature for

25   customers and not wide -- well, tell me if I'm

1   wrong, it's not a widely used feature by

2   non-customers. And so I want to understand, if

3   possible, if you know the reasoning behind it or

4   why people don't use it.

5   A   Well, I was speaking about a specific --

6   so, by our customers, I'll go into reasons why it's

7   not used by our customers.

8   Q   Cause some people don't use XRP, right,

9   in connection with the products?

10   A   I mean, that's a -- that's accurate.

11   Then we use -- but there's a separate -- why they

12   do, why folks use the decentralized exchange or why

13   folks do not use the decentralized exchange is

14   different, I think is a different point.

15   So, the -- when you're talking about

16   exchanges, the main thing that really matters is

17   that -- is the liquidity. And the answer is a

18   little complicated, but just bear with me.

19   That -- the early days of digital assets

20   in the industry around 2013, there weren't a lot of

21   exchanges in the world. And at that time, I don't

22   have specific numbers, but the decentralized

23   exchange in the XRP ledger was widely used by folks

24   around the world. Not necessarily in conjunction

25   with Ripple but it was a liquid exchange.

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1   As the crypto industry has matured,

2   individual centralized exchanges started to pop up.

3   So starting with Coinbase in 2012, '13, but now

4   there's hundreds of exchanges around the world,

5   centralized exchanges around the world.

6   One big difference between a centralized

7   exchange and a decentralized exchange is the

8   centralized exchanges are just faster. When I was

9   talking about the consensus mechanism, it has to be

10 slower because every five-some seconds you need a

11 consensus mechanism to verify that all the

12 transactions are correct. And if you miss it then

13 you go to the next five, so that would be ten

14 seconds.

15   Traders want really fast performance,

16 that's really important. And so the birth of

17 centralized exchanges around the world started to

18 happen around 2015, and now you guys may be aware

19 but there are hundreds, I don't know the exact

20 number, but hundreds of centralized exchanges

21 around the world. And liquidity, which is,

22 liquidity is like the trading in and out of these

23 digital assets really started to gravitate toward

24 centralized exchanges.

25   And so that's why you see a shift from

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1 folks in the early days of crypto using

2 decentralized exchanges. But as the industry has

3 matured and more institutional players come in they

4 want speed, they want performance, and it's moved

5 to centralized exchanges around the world. So like

6 the entire industry has -- has shifted.

7   Q   When I think of decentralized exchanges,

8 I actually think of non-custodial exchanges, where

9 the individual user has control over their funds.

10 Whereas in a centralized exchange, in addition to

11 the features that you mentioned, the customer's

12 assets are held by the exchange.

13   A   Yeah, so that's another -- that's

14 another -- yeah, that's another feature.

15   Q   So, thanks for that very detailed

16 explanation.

17   Who created the XRP ledger?

18   A   I don't know all the code contributors,

19 but I know if you look through the logs, I know

20 that David Schwartz was very active in creating the

21 XRP ledger. I know that Arthur Britto was involved

22 in creating the XRP ledger. And I know that Jed --

23 Jed McCaleb was also very active in creating the

24 XRP ledger.

25   Q   What about ███████████?

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          A   I don't know about his involvement in

1   creating the software run XRP ledger.

          Q   Okay. And at the time you joined Ripple,

2   was David Schwartz also with Ripple?

          A   I don't know about his employment

3   agreement, but I saw David Schwartz in the office

4   when I was -- when I joined Ripple.

          Q   At some point, did he have a formal role

5   with the company?

          A   Yeah, some point he had a formal role

6   with the company.

          Q   And do you know when that happened?

7   A   I don't know -- I don't know when that

8   happened.

          Q   Did you have any involvement with the

9   creation of the ledger?

10   A   No. I did not.

          Q   Did you or do you have any involvement

11   with the development of the XRP ledger?

12   A   No, I do not.

          Q   And are you or have you been involved

13   with the maintenance of the ledger?

14   A   Of the software of the ledger, I've not

15   been involved in the software of the ledger --

16   software maintenance of the ledger, no.

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1   Q   And when was the ledger created in

2   relation to the creation of Ripple Labs?

3   A   I don't know.

4   Q   Was it created before or after the

5   company was formed?

6   A   I don't know.

7   Q   Have you ever discussed when the

8   relationship between the creation of the ledger and

9   the formation of the company with anyone?

10   A   I've not discussed the formation of

11   the -- I have not discussed when it was created

12   versus when the company was created with anyone in

13   any detail.

14   Q   Have you read any news reports regarding

15   the creation of the ledger in relation to the

16   formation of the company?

17   A   I've read reports -- I've read articles

18   about the formation of the ledger.

19   Q   Okay. And did those articles talk about

20   the sequence of events regarding the ledger

21   creation and the formation of the company?

22   A   Yes.

23   Q   And what did they say?

24   A   It depends. Like the -- it runs the

25   gamut. Some articles have said -- said that the

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1   ledger was created before the company and then

2   others -- other news articles have said it was

3   formed -- well, the other articles I read it's like

4   it wasn't clear.

5   Q   Okay. And do you know what the --

6   which -- what's -- what is accurate and what's not?

7   A   I can say that the XRP ledger was created

8   well before I got there, which is pretty early on

9   in the company.

10   Q   Are there groups of people at the company

11   whose sole responsibility is to maintain and

12   develop the ledger?

13   A   So maintain the ledger is -- that -- no.

14   There's no one at the company that is maintaining

15   the ledger. The ledger is maintained by a set of

16   validating nodes around the world. And all

17   maintenance, in terms of upkeep, you know, new

18   ledger, sponging, something called memory waste,

19   all that is all managed through a set of

20   decentralized nodes on the -- on the network.

21   Q   What does it mean to develop on top of

22   the XRP ledger?

23   A   So, the -- just like Bitcoin and just

24   like Ethereum, the XRP ledger, yeah, the XRP ledger

25   itself can -- anyone can develop on top of it. And

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1   it's something called permission list.

2   Just like with Bitcoin or Ethereum you

3   can, if you have a computer and you have access to

4   the internet, you can actually write code that --

5   that plugs into the XRP ledger, Bitcoin, Ethereum.

6   And one example of that would be an exchange.

7   So, a centralized exchange as you

8   referred to it as a custodial exchange, these

9   folks, you know, don't -- they do not need anyone's

10 permission if they are developing on XRP ledger,

11 Bitcoin or Ethereum, they just build on top of the

12 ledger to interface with the ledger for deposits,

13 withdrawals of digital assets.

14   So, building on top of the ledger, one

15 example would be, as you called it, custodial

16 exchanges would be one application on top of the

17 XRP ledger. A wallet would be another application

18 that's built on top of the XRP ledger. Coil, a

19 company that does micro-payments is an example of

20 something built on top of the XRP ledger. And

21 Ripple products is -- that's another example of

22 something built on top of the XRP ledger. ███ a

23 gaming company, is an example of a technology built

24 on top of the XRP ledger.

25   Q   So the -- who's responsible for building

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1 Ripple products on top of the XRP ledger?

2   A   In terms of -- when you say,

3 "responsibility", what do you mean by that?

4   Q   Do you have responsibilities related to

5 the products, the Ripple products that are built on

6 top of the XRP ledger?

7   A   Yes. I'm partially responsible for

8 products built on top of the XRP ledger.

9   Q   And we spoke earlier today about your

10 responsibilities, are those the same

11 responsibilities?

12   A   Those are the same responsibilities.

13   Q   And are -- is there a group of engineers

14 who are actually writing the code that you, you

15 know, that interacts with the ledger for these

16 products?

17   A   There -- there is a group of -- there's a

18 group of folks that work on Ripple products. As I

19 mentioned earlier, there's -- some of the Ripple

20 products that are used in certain corridors do not

21 use the XRP ledger and there are some parts of the

22 product that use the XRP ledger.

23   The parts of the product that use the XRP

24 ledger is a service called ODL, On Demand

25 Liquidity, formerly known as xRapid. And those --

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1   the developers working on ODL, formerly known as

2   xRapid, those developers interface with the XRP

3   ledger.

4   Q   Okay. So, is it fair to say the products

5   that use XRP are the only products that are built

6   on top of the ledger?

7   A   Question; are you referring to Ripple

8   products or products in general?

9   Q   Ripple products.

10   A   So you -- the question is; do all -- do

11   only -- only the products, the Ripple products that

12   use XRP use the XRP ledger; is that the question?

13   Q   Yeah. So -- I -- I'll let you answer the

14   question.

15   A   There might be some parts of the product

16   that use some of the signing services. So there's

17   cryptographic signing services on the XRP ledger.

18   I don't know for certain, I'd have to look through

19   the code base to see for certain. But -- 'cause

20   the XRP ledger does more than -- I gave you the

21   three big buckets, but it also cryptographically

22   signs things. I don't know if that's used in other

23   parts of the product.

24   But the ODL product that I referred to

25   specifically uses the XRP ledger, that's correct.

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1   Q   Okay. I know ODL is the new terminology

2   for something called xRapid. But if it's okay with

3   you I'm going to use the term xRapid for today,

4   because that's what it has been known for, for most

5   of it's life. If that's okay. And if you forget

6   that's fine, but I probably will just refer to it

7   as xRapid.

8   A   Yeah, I might forget, but you can just

9   correct me. I've been trying to use ODL as much as

10 possible internally, so.

11   Q   Okay. Just since we're here now, why did

12 they change the name from xRapid to ODL?

13   A   That's going be -- I'll summarize it as

14 much as I can. We got feedback from a lot of our

15 customers, from press, from internal employees,

16 like new employees that were joining Ripple, that

17 trying to explain all these different things was

18 really complicated. So, you had to explain, xVia,

19 xCurrent and then you had to explain, you know,

20 xRapid.

21   So that was -- there was a lot of

22 confusion in terms of -- well, blockchain is pretty

23 confusing but then, you know, having these three

24 product names on top of it is also, you know,

25 confusing. So, one was like our customers were

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1   even confused. So, it's like wait, am I joining

2   xVia and wait, no we're using xVia and xRapid --

3   wait, no.

4   So, it just became very confusing for our

5   customers and as a result, you know, internally,

6   you know, it was also confusing. So that was one,

7   addressing that. And I'll talk about that in a

8   second.

9   The other thing was that when we had

10   started with the product names it was pretty early

11   on in the enterprise product journey. And, at that

12   time -- like at that time, it was -- when you only

13   have a few customers, it's tough to call something

14   RippleNet. And so it was easier just to say,

15   you're buying a given product, xCurrent.

16   Now that we have a lot of customers live,

17   it's a -- and I'm talking about a network using the

18   enterprise software, now, it's a network. Because

19   you have these customers that are using our

20   technology to remove friction and exchange

21   information in a better way, it's called -- it's

22   now a network, right?

23   You have folks in -- customers in India,

24   in the U.S., in Europe, in Latam, and so we said,

25   well, listen you don't need product names anymore.

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1   It's actually a network called RippleNet. And so

2   it's just a lot simpler now for us to say,

3   customer, you're joining RippleNet and get rid of

4   the product names. And every customer joins

5   RippleNet.

6   A subset of those customers use service

7   as part of RippleNet called, On Demand Liquidity,

8   that you'd like me to refer to as xRapid, which is

9   the former name. But On Demand Liquidity is that

10   specific service, that's part of RippleNet, is the

11   broader point.

12   So, we felt like that would help in terms

13   of adoption. So MoneyGram, ███████████ everyone

14   just joins RippleNet. And a subset of those, for

15   example, the MoneyGram's of the world use the On

16   Demand Liquidity service that's a component of

17   RippleNet.

18   Now, if you use Uber, you download the

19   app, started with, you know, just transportation,

20   but now you can, you know, get food and other kinds

21   of services, but it's part of the Uber app. You

22   can think of that as a similar -- similar analogy

23   if that helps.

24   Q   Okay. Thank you.

25   So you can call it ODL, I'll know what

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1   you're talking about, but I'll probably most

2   likely --

3   A   That's fine I'll know what you're --

4   Q   -- will refer to it as xRapid, but as

5   long as we're talking about the same thing.

6   Since you mention it, let's -- let's just

7   go there, now.

8   What is xCurrent and when was it

9   developed?

10   A   So, xCurrent is a piece of enterprise

11   software. It's -- it's decentralized

12   point-to-point technology. And what I mean by that

13   is, let's just use fictitious or semi-fictitious

14   examples, but if I'm the bank of Michigan and

15   you're the bank of Mexico, then what we could do is

16   both banks would run this xCurrent software and

17   they can instantly without going through the SWIFT

18   network or going to a correspondent bank, exchange

19   information.

20   So think about travel rule information,

21   which is something to do with compliance for

22   cross-boarder payments, think about OFAC

23   information, think about beneficiary details, all

24   that information gets exchanged, you know, using

25   the xCurrent product.

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1   Without any intermediary, without any

2   company entity like SWIFT in the middle, without a

3   correspondent bank necessarily in the middle. And

4   I, you know, that software is deployed on premise

5   at both of the, you know, the banks on the sending

6   side and on the receiving side usually to

7   facilitate a cross-boarder payment.

8   Q   Does xCurrent involve the use of XRP?

9   A   Well, that's what I was referring to

10   as -- it's a service that you can add on to

11   xCurrent. Just like in Uber you can use it for cars

12   but now you can use Uber for eats. You can use

13   xCurrent for non-ODL xRapid payments, but you can

14   also upgrade and use it for xRapid payments as

15   well.

16   Q   But if --

17   A   Everyone uses xCurrent. Like every

18   client that we sign, that's the base, you join

19   RippleNet, you join and you use xCurrent and then

20   you add on these services.

21   Q   Okay. You if you have no additional

22   services, does xCurrent involve the use of XRP?

23   A   It does not.

24   Q   Is it fair to describe xCurrent as a

25   messaging software to facility messaging between

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1   parties in a decentralized way?

2   A   Yeah, that's part -- that's 80 percent of

3   what the product does?

4   Q   What's the other 20 percent?

5   A   The other 20 percent is that the xCurrent

6   product on this -- so I'm the send bank, there's a

7   receive bank that has something called a ledger

8   inside of each one of these xCurrents -- and I'm

9   not talking about crypto payments, I'm just talking

10   about fiat payments -- it records and

11   cryptographically signs movements from the banks as

12   well.

13   And so what typically happens is, if I'm

14   going to send money to Mexico, you know, I'm a U.S.

15   bank, I'm going to open up an account with you,

16   your bank in Mexico. That's technically my bank's

17   money at your account. I want to make sure that

18   when I send a payment, I got a cryptographic

19   signature that it's withdrawing out of my bank in

20   Mexico.

21   So that's the other part of -- that's the

22   20 percent that it does. It cryptographically

23   signs that -- might be moving up and down

24   instantaneously. Before this technology, you'd have

25   to wait weekly for something called a

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1   reconciliation appoint -- reconciliation report

2   that the bank in Mexico, for example, would have to

3   send back to my bank in the United States.

4   So this is an instant way to do it. You

5   don't need to wait weekly for the report, and you

6   get it on a per-transaction basis. So why that's

7   useful is because if you send a transaction and you

8   don't get the signature back, you can immediately

9   audit the bank on the other side.

10   And that's -- that's like a general theme

11   with this technology is that, moving money today is

12   the same way you move money in, you know, years

13   ago. It's all based on trust. You have to trust

14   credit, everything with the receiving bank, if

15   you're sending into a country. And that's what

16   this product partially addresses, that's the 20

17   percent. The other is around certainty of

18   information.

19   Making it safer for compliance

20   information, beneficiary information, so if an

21   account is closed at the beneficiary, using the old

22   technology, you didn't know until you got a

23   end-of-date statement.

24   With this, you would instantly know that,

25   you know, your bank account was closed. Or you

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1   have a misprint in the bank account and you'd get

2   that back instantly. So those are some of the key

3   features or value propositions of the xCurrent

4   product even without the upgrade to the xRapid, ODL

5   product.

6   Q   And who are the potential or actual users

7   of xCurrent who would be -- who would benefit from

8   these features that you just described?

9   A   So regulated financial institutions are

10   the customers of these -- of the product. To

11   answer the second part of your question, which was

12   who would benefit; the banks, the financial

13   institutions benefit. So I think that's one. I

14   think regulators benefit because you have far

15   granular, far better exchange of information

16   related to compliance, OFAC creating travel rule.

17   You can now do travel rule screening in OFAC on a

18   5-dollar payment if you want. That's a big

19   improvement that regulators have given us good

20   feedback on.

21   And last point is, I think the customer

22   experience. For the end customer, the remittor,

23   the corporation, that has had no better way of

24   sending money since the early days of cross-boarder

25   payments. I think they benefit as well from better

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1   certainty of payment. Faster payments as well and

2   lower cost.

3   Q   So -- and the financial institutions

4   you're talking about are banks; are there other

5   financial institutions that are actual or potential

6   users of xCurrent?

7   A   So like, are you mean -- definitionally

8   like, which banks are the regulated -- regulated as

9   a bank in accordance to U.S. law -- there are money

10   transmitters as well, regulated money transmitters

11   in the U.S. that are also known as MSBs with money

12   transmitter licenses.

13   I actually don't know if MoneyGram is

14   technically a bank or a money transmitter, but I

15   believe they're a money transmitter, so that would

16   be another core target segment for the product.

17   Q   Okay. So banks and money transmitters,

18   MSBs that are regulated with FinCEN.

19   A   That's correct.

20   Q   And then going back to xCurrent, and this

21   is kind of a technical question, does xCurrent use

22   blockchain technology?

23   A   So, how much detail you want me to get

24   into, but, to me blockchain technology means the

25   leverages, decentralized technology, point-to-point

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1   technology and it also uses cryptographic

2   signatures and the xCurrent product uses all three.

3   Q   Okay. And does xCurrent -- are you

4   familiar with the Interledger protocol?

5   A   ILP Interledger protocol, yes, I am

6   familiar with it.

7   Q   And what is ILP?

8   A   So, are you asking about like, in general

9   what it does, or are you only -- about how the

10   protocol works or what benefits it provides; how

11   should I answer?

12   Q   I can -- I have specific questions, but

13   how does the ILP -- how does ILP compare to the XRP

14   ledger?

15   A   It's a little bit like apples and oranges

16   as a comparison. But, in general, the vision for

17   ILP Interledger protocol, the reason it's called

18   Interledger protocol is that it's not a specific

19   ledger. It's ledgers, blockchains, which are

20   ledgers.

21   So there's the Bitcoin ledger, there's

22   the XRP ledger, there's the Ethereum ledger. If

23   you adhere to the ILP protocol, you can

24   inter-operate those ledgers. So those are

25   cryptographic or blockchain ledgers, but there's

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1   also analog ledgers that are not blockchain. Let's

2   just call them blockchain ledgers and analog

3   ledgers.

4   ███████████ operates an analog

5   ledger. If they adhere to the ILP technology, then

6   they can inter-operate with other -- either analog

7   or blockchain ledgers that also adhere to the ILP

8   protocol.

9   And why that's important is because if

10   you really think about the internet, the reason the

11   internet works is that you sort of plug in either

12   an Ethernet or WiFi and information gets exchanged.

13   It's not like you have to join one network, versus

14   another network.

15   And with blockchain it's almost like you

16   had to -- prior to Interledger protocol you almost

17   joined the Bitcoin ledger or the Ethereum ledger

18   and with this protocol, it sort of combines all of

19   those ledgers into one interoperable protocol known

20   as the Interledger protocol.

21   Q   Is there one token that is associated

22   with ILP?

23   A   ILP is not -- is not a -- there's

24   reference software for it, but it's not a

25   blockchain like Ethereum or XRP ledger or Bitcoin,

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1   it has no token associated with it. It can use any

2   token. It can use Ethereum, it can use Bitcoin, it

3   can use analog U.S. dollars from ██████████

4   It's main purpose is to -- is a set of

5   standards of protocols to -- to move value from one

6   ledger to another ledger. And that ledger can be

7   digital, blockchain ledger or it can be analog like

8   a ███████████ ledger.

9   Q   Does xCurrent use the ILP -- the ILP?

10   A   Yeah. I didn't get into it -- into

11   detail, but when I was talking about the 20

12   percent, so the 80 percent is the messaging as you

13   put it. The 20 percent being -- coordinating the

14   movement of value using cryptographic signatures.

15   That 20 percent adheres to the Interledger

16   protocol.

17   And why that's important is, if Bank of

18   America, for example, uses xCurrent they make their

19   ledger compatible with ILP. So think of it as, if

20   you go traveling in Europe, and you forgot to

21   bring -- well, maybe you didn't forget, but you

22   have a plug --

23   Q   I don't go to Europe.

24   A   Okay -- you go to Asia, you get a plug,

25   and you have a converter to go from one, 110

1   whatever it is in the United States to 220, that's

2   what the -- the xCurrent product does. It takes an

3   analog ledger and that 20 percent I was referring

4   to, is the converter or makes it compatible with

5   the ILP protocol. And, again, the ILP protocol is

6   tokenless, it's just a standard or protocol to help

7   standardize the movement of value across multiple

8   ledgers.

9   Q   Okay. And I just don't want to get too

10   technical, but that 80 percent you were talking

11   about, does that use the XRP ledger or?

12   A   The 80 percent I'd mentioned that there's

13   maybe like one thing I would need to look into in

14   terms of cryptographic signing. But, to my

15   knowledge, other than that one aspect of

16   cryptographic signing it -- I do not believe it

17   uses the XRP ledger.

18   Q   So the 20 percent refers to the ILP.

19   A   Right. And so just to be clear, the 80

20   percent, other than that piece, does not use the

21   XRP ledger from my knowledge. The 20 percent with

22   the ILP, other than maybe looking into a couple of

23   cryptographic things, as a stand-alone product,

24   it's tokenless, it's not used by ILP -- XRP ledger

25   natively.

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1   Q   Got it. Got it. So how does Ripple make

2 money from xCurrent?

3   A   There are software agreements that we

4 sell to financial institutions around the world.

5 There are consulting services that we offer to help

6 integrate, they're called integration services.

7 And then in the -- in the future there could be

8 other services that we offer.

9   Q   So, does Ripple charge a licensing fee

10 for the software services?

11   A   So, for the software I believe it's a

12 licensing fee or a subscription fee. For the

13 services aspects of it --

14   Q   Okay.

15   A   -- which is different, I don't believe

16 there's a license with the services or the

17 consulting services or as I called it, the

18 integration services. I don't know exactly how

19 that's billed. It might be billed hourly or I

20 don't know the specifics, how the integration

21 services or the consulting services are billed.

22   Q   So, just those two components, the

23 licenses fees and then the consulting services? Or

24 is there a third component to, you know, the

25 revenues that the company earns from xCurrent?

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1   A   I don't know for certain, but I believe

2   those are the only two that I know of for the

3   xCurrent product. There -- yeah, I don't know for

4   certain, but I think those are the two.

5   Q   Are you involved in negotiating these

6   agreements with the customers of xCurrent?

7   A   Only from a product and technical aspect.

8   Q   Okay. Are you involved in negotiating

9   the fees that are charged?

10   A   I do not get involved in -- are you

11 asking like for clients, do I get involved in like

12 how the structure of the agreements from a pricing

13 perspective --

14   Q   Yes.

15   A   -- commercial perspective?

16   Q   Yes.

17   A   I don't get involved in the pricing or

18 commercial perspective of these clients'

19 agreements.

20   Q   And do you know how much money Ripple has

21 earned in connection with the xRapid product?

22   MR. HECKER: XRapid in particular?

23   MS. WAXMAN: I'm sorry, xCurrent. Thank

24 you.

25   A   I don't know.

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1   Q   Do you know generally?

2   A   I do not know.

3   Q   And are you responsible for selling

4 xRapid product to customers?

5   A   So my job in product is -- is really, as

6 we described earlier, to build, get customer

7 feedback. Selling the product is done by the sales

8 team and the business development team. I'm

9 brought in from time to time on consulting with

10 mostly technical matters.

11   There are a few times where, you know, if

12 we want to get a customer involved in some aspect

13 on the ODL or xRapid product that's not technical

14 as well.

15   Q   And do you know what year xCurrent was

16 introduced?

17   A   When you say introduced --

18   Q   When was it first sold.

19   A   I don't know the date of the first

20 contract.

21   Q   What year? Do you know what year?

22   A   I can only give you an estimate.

23   Q   Okay.

24   A   Somewhere between 2014 and '15.

25   Q   Okay.

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1   MS. WAXMAN: It's 12:30 now.   I just want

2   to go through xVia and maybe we'll take a break.

3   MR. CERESNEY: Sure.

4   MS. WAXMAN: We'll talk quickly about

5   that.

6   Q   Okay.   So what is xVia?

7   A   Some of our customers provided feedback

8   to us that xCurrent was too comprehensive in terms

9   of feature set.   And in software, when something is

10   too comprehensive it becomes difficult to -- to

11   implement.   And with the xCurrent software you

12   could, you now, I mentioned that there was a U.S.

13   bank and then there was a Mexican bank on the other

14   side as an example.

15   If you are receiving, you need the full

16   capabilities of xCurrent because you're receiving

17   the payment.   You have to clear over something

18   called local rails.   In the United States it's

19   called ACH, in Mexico it's called SPEI.   So it's

20   a-- you need the comprehensive feature set if

21   you're a receiver, the full xCurrent.

22   And our customers that were only sending

23   provided us feedback, is like, well, you have given

24   us 150 pages of a manual and we only need the first

25   20.   Can you slim down the product for us, for our